

the primary functionality of the host device, such as television functionality, or camcorder functionality.

Home network interface 315 determines the destination for data received from the home network. Home network interface 315 provides data from the home network for the host device functionality block 320 to host device functionality block 320. Home network interface 315 provides data to be sent out of the home network to home network portal control 310.

Home network interface 315 also determines the destination in the home network for data received from host functionality block 320 and received from the wireless module through home network portal control 310. Home network interface 315 passes data into the home network with destination information appropriate to the network protocol used in the home network.

FIG. 4 is a flow chart of registering a home network portal in a home network. In one implementation, each host device having a wireless module port in a home network performs this process on a periodic basis to check for a connected wireless module. The host device evaluates the status of the wireless module port, block 405. Referring to FIG. 3, in one implementation, home network portal control 310 evaluates wireless module port 305. The host device determines whether or not a wireless module is connected to the wireless module port, block 410. If a wireless module is not connected to the wireless module port, the host device returns to block 405. In one implementation, the host device waits for a period of time before returning to block 405. If a wireless module is connected to the wireless module port, the host device broadcasts to the other host devices in the home network that this host device is a home network portal, block 415. Referring to FIG. 3, in one implementation, home network portal 310 provides a broadcast message for the home network to home network interface 315. Home network interface 315 sends the message to each of the host devices in the home network. In one implementation, each host device in the home network records which host device is a home network portal, such as by using a data table in a respective home network interface 315. In another implementation, a host device which is a home network portal also broadcasts to the other host devices in the home network when the wireless module is removed and the home network portal is dissolved. In another implementation, each host

device periodically broadcasts to the other host devices in the home network whether or not that host device is a home network portal.

FIG. 5 is a flow chart of sending data out of the home network through the home network portal. A host device that has data to send out of the home network determines which host device is a home network portal, block 505. Referring to FIG. 3, in one implementation, a host device checks a data table in its home network interface 315 to determine which host device is a home network portal. The host device sends the data and a transmission request to the home network portal through the home network, block 510. The transmission request indicates the destination for the data, such as a server on the Internet. The home network portal sends the data through the wireless module across a wireless connection to an external network, such as the Internet, block 515. Referring to FIG. 3, in one implementation, in the home network portal, home network interface 315 receives the data and request and passes the data and request to home network portal control 310. Home network portal control 310 passes the data and destination to a wireless module through wireless module port 305. In one implementation, the wireless module packetizes the outgoing data.

FIG. 6 is a flow chart of receiving data from outside the home network through the home network portal. Incoming data, such as from the Internet, is received across a wireless connection at the wireless module in the home network portal, block 605. The host device in the home network portal receives the data from the wireless module and determines which host device in the home network is the intended destination host device for the incoming data, block 610. Referring to FIG. 3, in one implementation, in the home network portal, home network portal control 310 receives the data and destination from the wireless module through wireless module port 305. Home network portal control 310 passes the data and a destination in the home network (which may be the host device in the home network portal) to home network interface 315. The host device in the home network portal sends the data through the home network to the destination host device, block 615. Referring to FIG. 3, in one implementation, home network interface 315 passes the data out to the home network to the destination. If the destination is the host device in the home network portal, home network interface 315 passes the data to host functionality block 320.

Various illustrative implementations of the present invention have been described. Aspects of the present invention can be implemented in electronic circuitry, computer hardware, software, or in combinations of them. For example, in FIG. 3, home network portal control 310 and home network interface 315 in a host device can be implemented in various ways, such as with an FPGA, a hardwired design, a microprocessor architecture, or a combination. However, one of ordinary skill in the art will see that additional implementations are also possible and within the scope of the present invention. Accordingly, the present invention is not limited to only those implementations described above.